

LIST OF INSECT TYPE SPECIMENS IN THE  
ENTOMOLOGICAL COLLECTION OF THE  
BRIGHAM YOUNG UNIVERSITY, PROVO, UTAH, NO. IV.

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There is a tendency at present in the biological sciences to shy away from systematics in favor of molecular biological studies. The Linnaean system of dealing with the multitudinous forms of animate nature is being seriously questioned. Today, biologists are concerned with the synthesis of the living environment at levels of organization such as the "biota, concommunity, population, organism, cell, and molecule."<sup>3</sup> No doubt emphasis in this line of endeavor will prove to be revealing as to the similarity and unity of organisms. As advancements are made in this new approach to understanding the basic makeup of organisms, their similarity and life processes, there will still be a need for recognizing the great diversity of life forms. The causes that bring about diversity of organisms may be more clearly known and manipulated, but the end product, the objective entity, that which we now know as the species, will still exist.

Modern methods employed in taxonomy are superior to those of the Linnaean period and should, through additional refinements, continue to be one way of categorizing and reporting on the product of evolution. In systematizing plants and animals, workers have described the diverse forms and preserved, for future studies, some of the specimens used in the description of the new species. These specimens have been variously designated as: type, holotype, allotype, cotype, paratype, topotype and other designations. Experience has justified the preservation of specimens so designated by the author in making a description. Without the object described, it is well nigh impossible for biologists and research workers to make a satisfactory determination of some species. It is, therefore, in the interest of future research work with the insect group, that the species representing types are listed in these reports.

Entomology is an important discipline since it is concerned with the study of a large segment of animal life. Research in this field in the western states may be aided by having authoritative collections and some type material available at a focal point such as at this university.

ORDER ORTHOPTERA

FAMILY GRYLLACRIDIDAE

*Ceuthophilus nevadensis* Barnum.

Brigham Young Univ. Sci. Bul., Biol. Ser., 4(3):96-100, 1964.

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<sup>3</sup>Raven, P. H., and H. W. Richard. 1967. Syst. Zool. 16:1.

Paratypes, 19 ♂♂, 16 ♀♀; Nevada Test Site, Nye Co., Nev.  
(Andrew Barnum).

*Ceuthophilus deserticola* Barnum.

Brigham Young Univ. Sci. Bul., Biol. Ser., 4(3):100-103, 1964.

Paratypes, 7 ♂♂, 9 ♀♀; Nevada Test Site, Nye Co., Nev.  
(Andrew Barnum).

## ORDER HEMIPTERA

### FAMILY MIRIDAE

*Chlamydatus becki* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):28, 1968.

Paratypes, 2 ♂♂, 2 ♀♀; Nevada Test Site, Nye Co., Nev.  
(H. H. Knight and J. M. Merino).

*Microphyllus syphoricarpi* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):30, 1968.

Paratypes, 1 ♂, 1 ♀; Nevada Test Site, Nye Co., Nev. (H. H.  
Knight).

*Plagiognathus salviae* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):30, 1968.

Paratypes, 4 ♂♂, 4 ♀♀; Nevada Test Site, Nye Co., Nev. (D E.  
Beck, H. H. Knight and J. M. Merino).

*Merinocapsus ephedrae* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):34, 1968.

Paratypes, 3 ♂♂, 5 ♀♀; Nevada Test Site, Nye Co., Nev. (D E.  
Beck, H. H. Knight).

*Beckocoris laticephalus* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):36, 1968.

Paratypes, 5 ♂♂, 5 ♀♀; Nevada Test Site, Nye Co., Nev.  
(H. H. Knight, J. M. Merino).

*Europiella punctipes* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):47, 1968.

Paratypes, 2 ♂♂, 1 ♀; Nevada Test Site, Nye Co., Nev. (H. H.  
Knight, D E. Beck).

*Europiella lycii* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):40, 1968.

Paratypes, 1 ♂, 3 ♀♀; Nevada Test Site, Nye Co., Nev. (D E.  
Beck, H. H. Knight).

*Europiella grayiae* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):41, 1968.

Paratypes, 5 ♂♂, 5 ♀♀; Nevada Test Site, Nye Co., Nev. (D E.  
Beck, H. H. Knight and J. M. Merino).

*Europiella stitti* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):46, 1968.

Paratype, 1 ♀; Gila Bend, Ariz.; 13 Feb. 1941 (Loyd L. Stitt).

*Europiella nigrofemorata* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):39, 1968.

Paratype, 1 ♂; Nevada Test Site, Nye Co., Nev. (H. H. Knight, D E. Beck and J. M. Merino).

*Europiella arizonae* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):46, 1968.

Paratype, 1 ♀; Aztec, Ariz., 3 Feb. 1941 (Loyd L. Stitt).

*Europiella nigricornis* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):40, 1968.

Paratypes, 1 ♂, 1 ♀; Nevada Test Site, Nye Co., Nev. (H. H. Knight, D E. Beck).

*Europiella nicholi* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):42, 1968.

Paratype, 1 ♀; Rincon Mts., Ariz., 2 Sept. 1923, Alt. 3,300 (A. A. Nichol).

*Europiella albipubescens* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):46, 1968.

Paratype, 1 ♂; Nevada Test Site, Nye Co., Nev. (H. H. Knight, D E. Beck and J. M. Merino).

*Europiella yampae* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):43, 1968.

Paratype, 1 ♂; Steamboat Sprs., Colo., 12 July 1964, 6700' (H. H. Knight).

1 ♀, Steamboat Sprs., Colo., 11 July 1964, 6700' (H. H. Knight).

*Europiella unipuncta* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):44, 1968.

Paratypes, 1 ♂, 1 ♀; Nevada Test Site, Nye Co., Nev. (J. M. Merino, H. H. Knight).

*Europiella rubricornis* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):39, 1968.

Paratype, 1 ♂; Richfield, Utah, 11 June 1930, (Light Trap); (E. W. Davis).

*Europiella rufiventris* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):42, 1968.

Paratypes, 1 ♂, 1 ♀; Goldwater, Arizona, 6 April 1940 (Loyd L. Stitt).

*Psallus purshiae* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):48, 1968.

Paratype, 1 ♂; Nevada Test Site, Nye Co., Nev. (H. H. Knight, J. M. Merino).

*Psallus atriplicis* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):48, 1968.

Paratype, 1 ♂; Nevada Test Site, Nye Co., Nev. (H. H. Knight).

*Phymatopsallus prosopidis* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):49, 1968.

Paratypes, 4 ♂ ♂, 4 ♀ ♀; Nevada Test Site, Nye Co., Nev (D E. Beck, H. H. Knight).

*Phymatopsallus rubesi* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):50, 1968.

Paratypes, 1 ♂, 1 ♀; Nevada Test Site, Nye Co., Nev. (J. M. Merino).

*Lepidopsallus arizonae* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):52, 1968.

Paratypes, 1 ♂, 1 ♀; Mt. Lemon, Ariz., Santa Cat. Mts., 27 July 1917, 9000' (H. H. Knight).

*Lepidopsallus nicholi* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):52, 1968.

Paratype, 1 ♀; Empire Mts., 5000', Ariz., 20 May 1928 (A. A. Nichol).

*Lepidopsallus pini* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):53, 1968.

Paratype, 1 ♀; Ft. Garland, Colo., 10 Aug. 1925 (H. H. Knight) (*Pinus edulis*).

*Lepidopsallus longirostris* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):54, 1968.

Paratypes, 1 ♂, 1 ♀; Pingree Pk., Colo., 20 Aug. 1925 (H. H. Knight).

*Lepidopsallus monticola* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):54, 1968.

Paratypes, 1 ♂, 1 ♀; Veta Pass, Colo., 9 Aug. 1925 (H. H. Knight) (On *Pinus*).

*Nevadocoris becki* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):59, 1968.

Paratypes, 3 ♂♂, 3 ♀♀; Nevada Test Site, Nye Co., Nev. (H. H. Knight, D E. Beck and J. M. Merino) (On *Tetradymia*).

*Nevadocoris pallidus* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):60, 1968.

Paratypes, 1 ♂, 1 ♀; Nevada Test Site, Nye Co., Nev. (D E. Beck, H. H. Knight) (On *Grayia spinosa*).

*Nevadocoris bullatus* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):60, 1968.

Paratypes, 2 ♂♂, 2 ♀♀; Nevada Test Site, Nye Co., Nev. (D E. Beck, H. H. Knight) (On *Chrysanthemum*).

*Brachyceratocoris nevadensis* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):61, 1868.

Paratypes, 2 ♂♂, 2 ♀♀; Nevada Test Site, Nye Co., Nev. (H. H. Knight).

*Macrotylus salviae* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):62, 1968.

Paratypes, 2 ♂♂, 2 ♀♀; Nevada Test Site, Nye Co., Nev. (D E. Beck and H. H. Knight).

*Coquilletta luteiclava* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):63, 1968.

Paratypes, 1 ♂; 1 ♀; Nevada Test Site, Nye Co., Nev. (H. H. Knight and J. M. Merino).

*Coquillettia albella* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):62, 1968.

Paratypes, 1 ♂; Nevada Test Site, Nye Co., Nev. (H. H. Knight and J. M. Merino). On *Eriogonum inflatum*.

*Dicyphus ribesi* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):70, 1968.

Paratypes, 2 ♂ ♂, 2 ♀ ♀; Nevada Test Site, Nye Co., Nev. (Beck, Marino and Knight).

*Dicyphus hesperus* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):73, 1968.

Paratypes, 1 ♂; Moscow, Idaho, 18 Mar. 1934; 2560'. (H. Shipman) (Mullen). 1 ♀, Genese, Ida., 23 May 1936 (R. E. Miller).

*Dicyphus stitti* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):74, 1968.

Paratype, 1 ♂; Gila Bend, Ariz., 6 Oct. 1940 (Loyd L. Stitt). On *Martynia parviflora*.

*Macrolophus mimuli* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):75, 1968.

Paratypes, 1 ♂, 1 ♀; Huachuca Mts., 6000'. Ariz., 14 June 1928 (A. A. Nicol). Breeding on *Mimulus cardinalis*.

*Sixeonotus bebbiae* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):76, 1968.

Paratype, 1 ♂; Mohawk, Ariz., 23 Apr. 1940 (Loyd L. Stitt).

*Sixeonotus dextratus* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):76, 1968.

Paratype, 1 ♂; Tucson, Ariz., Sabino Canyon, 23 July 1917 (H. H. Knight).

*Sixeonotus areolatus* Knight.

Bul. Brook. Ent. Soc. 23:243.

Paratype, 1 ♂; Rock Island, Tex., 3 1/2 m. Northwest; 20 June 1922 (Grace O. Wiley).

*Largidea nevadensis* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):84, 1968.

Paratypes, 1 ♂, 1 ♀; Nevada Test Site, Nye Co., Nev. (H. H. Knight and J. M. Merino). On *Pinus monophylla*.

*Labops hirtus* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):88, 1968.

Paratype, 1 ♂; Yellowstone Park, Wyo., 20 July 1925 (A. A. Nichol).

*Slaterocoris longipennis* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):90, 1968.

Paratypes, 2 ♂ ♂, 2 ♀ ♀; Nevada Test Site, Nye Co., Nev. (H. H. Knight).

*Slaterocoris rubrofemoratus* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):90, 1968.  
Paratypes, 1 ♂, 2 ♀ ♀; Nevada Test Site, Nye Co., Nev. (H. H. Knight). On *Artemesia tridentata*.

*Lopidea deserta* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):99, 1968.  
Paratypes, 5 ♂ ♂, 5 ♀ ♀; Nevada Test Site, Nye Co., Nev. (Beck, Knight and Merino).

*Lopidea calli* Knight.

Bul. Brook. Ent. Soc., 29:11, 1934.  
Paratype, LaSal, San Juan, Co., Utah, June, 1927 (Anson Call, Jr.).

*Lopidea becki* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):98, 1968.  
Paratype, 1 fl; Nevada Test Site, Nye Co., Nev. (Beck, Knight, and Merino). On *Eriogonum umbellatum*.

*Ceratopidea daleae* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):100, 1968.  
Paratypes, 3 ♂ ♂, 3 ♀ ♀; Nevada Test Site, Nye Co., Nev. (H. H. Knight). On *Dalea polyadenia*.

*Daleapidea daleae* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):101, 1968.  
Paratypes, 1 ♂, 1 ♀; Nevada Test Site, Nye Co., Nev. (Beck, Knight and Merino).

*Hesperocapus plagiatus* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):103, 1968.  
Paratype, 1 ♀; Nevada Test Site, Nye Co., Nev. (H. H. Knight).

*Hesperocapus artemisicola* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):102, 1968.  
Paratype, 1 ♂; Hudson, Colo., 25 Aug. 1925 (H. H. Knight) (*Artem. filifolia*).

*Dichaetocoris nevadensis* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):103, 1968.  
Paratypes, 2 ♂ ♂, 2 ♀ ♀; Nevada Test Site, Nye Co., Nev. (Knight and Merino).

*Dichaetocoris merinoi* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):111, 1968.  
Paratype, 1 ♂; Nevada Test Site, Nye Co., Nev. (Knight and Merino). On *Piulus monophylla*.

*Dichaetocoris pinicola* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):110, 1968.  
Paratypes, 3 ♂ ♂, 3 ♀ ♀; Nevada Test Site, Nye Co., Nev. (Knight and Merino). On *Pinus monophylla*.

*Dichaetocoris symphoricarpi* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):112, 1968.  
Paratypes, 5 ♂ ♂, 5 ♀ ♀; Nevada Test Site, Nye Co., Nev.

(Beck, Knight and Merino). Host plant *Symporicarpos longifloris*.

*Dichaetocoris juniperi* Knight.

Brigham Young Univ., Sci. Bul., Biol. Ser., 9(3):113. 1968.

Paratypes, 3 ♂♂, 3 ♀♀; Nevada Test Site, Nye Co., Nev. (Knight and Merino). On *Juniperus osteosperma*.

*Dichaetocoris utahensis* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):114. 1968.

Paratype, 1 ♀; Scipio, Utah. 29 June 1965 (H. H. Knight).

*Dichaetocoris stanleyae* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):115. 1968.

Paratypes, 2 ♂♂; Nevada Test Site, Nye Co., Nev. (Beck, Knight and Merino). Host plant *Stanleya pinnata*.

*Dichaetocoris coloradensis* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):116. 1968.

Paratypes, 1 ♂, 1 ♀; Durango, Colo., 13 Aug. 1925 (H. H. Knight).

*Melanotichus shoshonea* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):125. 1968.

Paratypes, 1 ♂; Yellowstone Nat. Park, Wyo., 8 Aug. 1937 (H. H. Knight). 1 ?, Shoshone Nat. Forest, Wyo., 7 Aug. 1927 (H. H. Knight).

*Melanotrichus azteci* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):122. 1968.

Paratype, 1 ♀; Phoenix, Ariz., 17 Mar. 1939 (Loyd L. Stitt).

*Melanotrichus malvastri* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):120. 1968.

Paratypes, 1 ♂, 1 ♀; Whittier, Cal., 18 April 1935 (E. L. Padock).

*Melanotrichus nevadensis* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):122. 1968.

Paratypes, 5 ♂♂, 5 ♀♀; Nevada Test Site, Nye Co., Nev. (H. H. Knight and J. M. Merino). On *Artemisia tridentata*.

*Melanotrichus pallens* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):125. 1968.

Paratypes, 1 ♂, 1 ♀; Nevada Test Site, Nye Co., Nev. (D. E. Beck, H. H. Knight and J. M. Merino).

*Melanotrichus eurotiae* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):128. 1968.

Paratypes, 5 ♂♂, 5 ♀♀; Nevada Test Site, Nye Co., Nev. (D. E. Beck, H. H. Knight and J. M. Merino). Taken on *Euratia lanata*.

*Melanotrichus atriplicis* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):125. 1968.

Paratype, 1 ♀; Nevada Test Site, Nye Co., Nev. (H. H. Knight and J. M. Merino). Taken on *Atriplex canescens*.

*Parthenicus furcatus* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):133, 1968.  
Paratype, 1 ♂; Nevada Test Site, Nye Co., Nev. (D E. Beck  
and J. M. Merino). Taken at incandescent light.

*Parthenicus pinicola* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):140, 1968.  
Paratypes, 1 ♀; Grand Canyon, Ariz., 40 mi. South, 3 Aug. 1917  
(H. H. Knight). 1 ♂; Durango, Colo., 13 Aug. 1925 (H. H.  
Knight).

*Parthenicus merinoi* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):135, 1968.  
Paratype, 1 ♂; Nevada Test Site, Nye Co., Nev. (D E. Beck  
and J. M. Merino).

*Parthenicus atriplicis* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):135, 1968.  
Paratypes, 1 ♂, 1 ♀; Nevada Test Site, Nye Co., Nev. (H. H.  
Knight and J. M. Merino).

*Parthenicus incurvus* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):150, 1968.  
Paratype, 1 ♂; Nevada Test Site, Nye Co., Nev. (D E. Beck  
and J. M. Merino).

*Parthenicus becki* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):149, 1968.  
Paratypes, 1 ♂, 1 ♀; Nevada Test Site, Nye Co., Nev. (H. H.  
Knight).

*Parthenicus conspersus* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):139, 1968.  
Paratypes, 1 ♂, 1 ♀; Richfield, Utah, 8 July 1930 (Light trap).  
(E. W. Davis).

*Parthenicus cowaniæ* Knight.fl

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):148, 1968.  
Paratypes, 1 ♂, 1 ♀; Grand Canyon, Ariz., 3 Aug. 1917 (H.  
H. Knight).

*Parthenicus boutalouae* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):154, 1968.  
Paratype, 1 ♀; Hauchuca Mts., 6000'. Ariz., 14 June 1928 (A.  
A. Nichol). On *Bouteloua gracilis*.

*Ceratocapsus nevadensis* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):156, 1968.  
Paratypes, 2 ♀; Nevada Test Site, Nye Co., Nev. (D E. Beck.  
H. H. Knight and J. M. Merino). Taken on *Sphaeralcea*.

*Pilophorus miscosetosus* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):169, 1968.  
Paratypes, 1 ♂, 1 ♀; Nevada Test Site, Nye Co., Nev. (H. H.  
Knight and J. M. Merino).

*Pilophorus merinoi* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):175, 1968.

Paratypes, 1 ♀; Nevada Test Site, Nye Co., Nev. (H. H. Knight and J. M. Merino).

*Pilophorus utahensis* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):175, 1968.

Paratypes, 1 ♂; Gnd. Junc. Colo., 28 July 1900; 1 ♀; Leeds, Utah, 12 Oct. 1952 (E. W. Davis).

*Pilophorus nevadensis* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):172, 1968.

Paratype, 1 ♂; Wells, 15 mi. East. Nev. 12 July, 1965 (H. H. Knight).

*Pilophorus hesperus* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):169, 1968.

Paratypes, 1 ♂, 1 ♀; Estes Park, Colo., 24 Aug. 1925 (H. H. Knight).

*Pilophorus diffusus* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):168, 1968.

1 Paratype; Pingree Park, Colo., 20 Aug. 1923 (C. J. Drake).

*Pilophorus dislocatus* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):171, 1968.

Paratype, 1 ♀; Huachuca Mts., Ariz., 29 July 1905 (L. L. Stitt).

*Pilophorus salicis* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):173, 1968.

Paratypes, 1 ♂; Las Animas, Colo., 6 Aug. 1925 (H. H. Knight). 1 ♀, Wray, Colo., 4 Aug. 1925 (H. H. Knight).

*Irbisia shulli* Knight.

Bul. Brook. Ent. Soc., 36:75, 1941.

Paratypes, 1 ♂; Lenore, Ida., 7 May 1938, 1000' (W. E. Shull).

1 ♀, Lenore, Ida., 7 May 1938, 1000. (W. W. Shull, E. Ritzheimer).

*Irbisia fuscipubescens* Knight.

Bul. Brook. Ent. Soc., 36:76, 1941.

Paratypes, 1 ♂, 1 ♀; Tampico, Wash., 10 May 1925 (E. W. Davis).

*Irbisia elongate* Knight.

Bul. Brook. Ent. Soc., 36:77, 1941.

Paratypes, 1 ♂, 1 ♀; Wen. Mts., Wn., 9 July 1930 (F. P. Dean).

*Irbisia nigripes* Knight.

Canadian Ent., 57:94, 1925.

Autotype, Rosevere Creek, Raft River Mts., Utah, June 1928 (D. Elden Beck).

*Pinalitus brevirostris* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):187, 1968.

Paratypes, 1 ♂; Trinidad, Colo., Stonewall, 8500', 7 Aug. 1925 (H. H. Knight). 1 ♀; Trinidad, Colo., Stonewall 8500', 8 Aug. 1925 (H. H. Knight).

*Pinalitus rubrotinctus* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):189, 1968.  
Paratype, 1 ♀; Mt. Lemon, Ariz., Santa Cat. Mts., July 26, 1917, 9000' (H. H. Knight).

*Dichrooscytus flavescens* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):196, 1968.  
Paratypes, 2 ♀; Newcastle, Wyo., 19 Aug. 1927 (H. H. Knight).  
1 ♂; Grand Can., Ariz., 6 Sept. 1931 (H. H. Knight); 1 ♀;  
Nevada Test Site, Nye Co., Nev. (D E. Beck, H. H. Knight).

*Dichrooscytus rufivenosus* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):196, 1968.  
Paratypes, 1 ♂. 1 ♀; Pagosa Sprs., Colo., 12 Aug. 1925 (H. H. Knight).

*Dichrooscytus ruberellus* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):199, 1968.  
Paratypes, 1 ♂, 1 ♀; Pingree Pk., Colo., 22 Aug. 1925 (H. H. Knight).

*Phytocoris flavellus* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):234, 1968.  
Paratypes, 1 ♂, 1 ♀; Nevada Test Site, Nye Co., Nev. (D E. Beck, H. H. Knight, and J. M. Merino).

*Phytocoris albidosquams* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):232, 1968.  
Paratype, 1 ♂; Nevada Test Site, Nye Co., Nev. (D E. Beck).

*Phytocoris juniperanus* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):238, 1968.  
Paratype, 1 ♂; Nevada Test Site, Nye Co., Nev. (H. H. Knight and J. M. Merino). On *Juniperus osteosperma*.

*Phytocoris subcinctus* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):254, 1968.  
Paratype, 1 ♂; Richfield, Utah, 15 Aug. 1929 (E. W. Davis),  
Light trap.

*Phytocoris becki* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):214, 1968.  
Paratypes, 5 ♂♂, 3 ♀♀; Nevada Test Site, Nye Co., Nev. (D E. Beck, H. H. Knight, and J. M. Merino). Taken on *Ephedra nevadensis*.

*Phytocoris tanneri* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):257, 1968.  
Paratype, 1 ♂; Richfield, Utah, 15 July 1929 (E. W. Davis).  
Taken at light trap.

*Phytocoris rostratus* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):253, 1968.  
Paratype, 1 ♂; Nevada Test Site, Nye Co., Nev. H. H. Knight,  
(D E. Beck, and J. M. Merino). Swept from *Chrysanthemum  
nauseosus*.

*Phytocoris tricintus* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):256, 1968.

Paratype, 1 ♀; Tucson, Ariz., 12 May 1929 (E. D. Ball).

*Phytocoris merinoi* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):227, 1968.

Paratypes, 1 ♂, 1 ♀; Nevada Test Site, Nye Co., Nev. (D. E. Beck, H. H. Knight and J. M. Merino). Taken on *Grayia spinosa*.*Phytocoris breviusculus* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):226, 1968.

Paratypes, 1 ♂, 3 ♀ ♀; Nevada Test Site, Nye Co., Nev. (J. M. Merino). Taken at black light.

*Phytocoris deserticola* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):251, 1968.

Paratype, 1 ♀; Nevada Test Site, Nye Co., Nev. (H. H. Knight).

*Phytocoris nigrolineatus* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):224, 1968.

Paratype, 1 ♂; Nevada Test Site, Nye Co., Nev. (H. H. Knight and J. Merino). Taken on *Solazaria mexicana*.*Phytocoris reticulatus* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):217, 1968.

Paratypes, 1 ♂, 1 ♀; Nevada Test Site, Nye Co., Nev. (Taken from can pit-trap).

*Sittocapsus franzeriae* Knight.

Entomological News, 53:156, 1942.

Paratype, Mohawk, Ariz., April 6, 1927 (Loyd L. Stitt).

*Bolteria juniperi* Knight.

Brigham Young Univer. Sci. Bul., Biol. Ser., 9(3):202, 1968.

Paratypes, 1 ♂; Nevada Test Site, Nye Co., Nev., 1 ♀; Scipio, Utah, 29 June 1965 (H. H. Knight).

## FAMILY SALDIDAE

*Saldula varionis* Drake and Hottes.

Great Basin Nat., 10(1-4):57, 1950.

Paratypes, 7, 5 from Escalante Desert, Kane Co., Utah (D Elden Beck); 1 from Gateway, Colo., Sept.-Oct. 1949 (F. C. Hottes and C. Drake).

## ORDER DIPTERA

## FAMILY TIPULIDAE

*Erioptera maria* Alexander.

Amer. Midl. Nat., 39:20, 1948.

19 paratypes; Puffers Lake, Beaver Canyon, Utah; 20 July 1936 (D. Elmo Hardy).

*Tipula edmundsi* Alexander.

Amer. Midl Nat., 39:75, 1948.

1 paratype; Logan Canyon, Utah Experimental Station; 22 May 1938 (D. Elmo Hardy).

#### FAMILY BIBIONIDAE

*Bibio knowltoni* var. *paltidus* Hardy.

Utah Acad. Sci., Arts and Letters, 14:203, 1937.

Holotype ♂ - Provo Environs, Utah; 8 May 1937 (D. Elmo Hardy).

Allotype ♀ - Provo Environs, Utah; 8 May 1937 (D. Elmo Hardy).

Paratype ♂ and ♀ - Provo Environs, Utah Co., Utah (Lowell Miller).

*Bibio lobata* Hardy.

Utah Acad. Sci., Arts and Letters, 14:203, 1937.

Paratype ♀ - Sierra Co., California; W. M. Wheeler Collection.

*Bibio painteri* James.

Amer. Mus. Novitates 832:2, 1936.

2 paratypes; Manhattan, Kansas; 17 April 1934 C. W. Sabrosky).

*Bibio albipennis beameri* Hardy.

Kans. Univ. Sci. Bul., 30:451, 1945.

8 paratypes; Douglas Co., Kansas; 5 November 1931 (R. H. Beamer).

*Plecia americana* Hardy.

Kans. Ent. Soc. Jour., 13:15, 1940.

1 paratype; Pensacola, Florida; 30 April 1888 (A. S. Stevens).

*Plecia nearectic* Hardy.

Kans. Ent. Soc. Jour., 13:20, 1940.

1 paratype ♂ - Morgan City, Louisiana; 17 April 1938 (John Standish).

*Bibio melanopilosus* var. *bisepta* Hardy.

Utah Acad. Sci., Arts and Letters, 14:204, figs. 7, 8, 9, 10, 1937.

Holotype, allotype, and 44 paratypes; Provo Environs (Brigham Young University Campus), Utah, 12 May 1936 (D. E. Hardy).

*Bibio lucens* Hardy.

Utah Acad. Sci., Arts and Letters, 14:203-204, 1937.

3 paratypes; 1 - Hennepin Co., Minn., Oak Grove; 13 May 1933 (A. A. Nichol). 1 - Mer Blue, Ont.; 28 May 1927 (G. S. Walley). 1 - Miners Bay, Ont.; 26 May 1929 (G. S. Walley).

*Bibio knowltoni* Hardy.

Utah Acad. Sci., Arts and Letters, 14:202-203, figs. 5 and 6, 1937.

Allotype ♀; Sandy, Utah; 5 May 1931 (G. F. Knowlton) (*On Sophia sophia*).

Holotype ♂; Granger, Utah; 29 April 1931 (G. F. Knowlton) (*On Lepidium*).

Paratype ♂; Sunset, Utah; 5 May 1931 (G. F. Knowlton) (*On Erodium cleutarium*).

*Bibio sericata* Hardy.

Utah Acad. Sci., Arts and Letters, 14:207, 1937.

14 paratypes; 6 - Sunrise, ele. 6318 ft. Mt. Rainier, Washington; 13 August 1931 (J. Wilcox). 8 - Headley, B.C.; 29 August 1923 (C. B. Garrett).

*Bibio mickeli* Hardy.

Utah Acad. Sci., Arts and Letters, 14:205, figs. 11, 12, 1937.

47 paratypes; 27 - Prontenac, Minn.; 29 May 1930 (C. E. Mickel). 18 - Goodhue Co., Minn.; 29 May 1930 (Carl T. Schmidt). 1 - Minneapolis, Minn., Mississippi River near "U"; 18 May 1922 (Wm. E. Hoffmann). 1 - Ecology Collection; Hennepin Co., Minn.; basswood-maple ass'n; 27 May 1922 (Wm. E. Hoffmann).

*Bibio rufalipes* Hardy.

Utah Acad. Sci., Arts and Letters, 14:207, 1937.

2 paratypes - Waco, Texas (Belfrage) Collection of C. V. Riley.

*Bibio nigrifemoratus* Hardy.

Utah Acad. Sci., Arts and Letters, 14:206, 1937.

6 paratypes; 2 - Monte, B.C.; 13 May 1936 (J. K. Jacob). 1 - Rochester, Washington; 30 March 1932 (Wm. W. Baker). 2 - Mecham, Oregon; Ele. 3680 ft.; 8 May 1927 (H. A. Schullen). 1 - Kiger's Island, Oregon; 12 April 1930 (J. Wilcox).

*Bibio utahensis* Hardy.

Utah Acad. Sci., Arts and Letters, 14:208-209, 1937.

1 Holotype and 33 paratypes.

1 Holotype and 16 paratypes - Provo Environs, Utah Co., Utah (Harry Thomas). 5 - South Fork, Provo Canyon, Utah; 8 May 1937 (D. E. and Agnes Hardy). 1 - Utah Lake, East Side, Utah Co., Utah. 3 - Provo Environs, Utah; 10 May 1937 (M. I. Killpack). 1 - Provo, Utah (A. Sutherland). 6 - Provo, Utah (D. E. Hardy). 1 - Aweme, Man., Canada; 30 May 1923 (R. M. White).

*Bibio signatus* Hardy.

Utah Acad. Sci., Arts and Letters, 14:208, 1937.

1 Holotype ♂ - Spanish Fork, Utah; 29 April 1936 (D. E. Hardy).

*Bibio velcida* Hardy.

Utah Acar. Sci., Arts and Letters, 14:209, 1937.

4 ♂ paratypes; 3 - Low Bush, Ontario, Lake Abitibi; 12 June 1925 (N. K. Bigelow). 1 - Fredericton, New Brunswick; 30 May 1931 (R. P. Gorham).

*Philia oklahomensis* Hardy.

Utah Acad. Sci., Arts and Letters, 14:211, figs. 19, 20, 21, 1937.

11 paratypes; 1 - Locust Grove, Oklahoma; 5 May 1934 (E. E. Ivy) (genitalia dissected). 2 - Paris, Texas; 9 April 1904 (C. T. Brues). 3 - College Station, Texas; 27, 30 March 1932 (H. J. Reinhard) (4642). 3 - Victoria, Texas; 13 March 1908 (in

Spanish Moss) (J. D. Mitchell). 1 - Dallas, Texas; 25 March 1906 (on *salix*) (W. D. Pierce).

*Philia arizonaensis* Hardy.

Utah Acad. Sci., Arts and Letters, 14:209, 210, figs. 13, 14, 1937.  
3 paratypes; Huachuca Mt., Arizona (Brooklyn Museum Coll. 1929, Catalog No. 162 (2) and 163).

*Philia breviceps* var. *atelestes* Hardy.

Utah Acad. Sci., Arts and Letters, 14:210, 1937.  
51 paratypes; Meach Lake, Quebec; 21 June 1916.

*Philia stigmaterus* var. *nigra* Hardy.

Utah Acad. Sci., Arts and Letters, 14:212, 1937.  
14 paratypes; 3 - Plummer, Minn.; 10 and 12 September 1931 (Donald Denning). 5 - Polk Co., Minn.; 5 September 1936 (D. G. Denning). Kittson Co., Minn.; 20 June 1936 (D. G. Denning). 1 - Lancaster, Minn., 26 August 1936 (D. G. Denning).

*Philia jamesi* Hardy.

Utah Acad. Sci., Arts and Letters, 14:210, 211, figs. 15, 16, 17, 18, 1937.  
31 paratypes; 4 - Pingree Park, Colorado; 19 August 1935 (M. and H. James). 1 - Pingree Park, Colorado; 15 August 1934 (A. E. Pritchard). 11 - Pingree Park, Colorado; 14 August 1934 (C. W. Sabrosky). 6 - Masonville, Colorado, 5 and 6 September 1934. 9 - Marshall Pass, Colorado; 16 September 1917, Cornell University Expedition, ele. 10,250 ft. (R. C. Shannon).

### FAMILY STRATIOMYIDAE

*Ptilocera bergi* James

Proc. U. S. Nat'l. Mus., Vol. 98, No. 3228:202, 1948.

5 ♀ ♀; Solomon Islands, Guadalcanal; 1944 (D. E. Beck collection #419. 325, 367, 420, 587, 381). 1 ♀ - Solomon Islands, Guadalcanal; 1944 (Ernest Reimschissel). 3 ♂ ♂ - Solomon Islands, Guadalcanal; 1944 (D. E. Beck collection #587, 367, 362).

### FAMILY TABANIDAE

*Chrysops dilatus* Rowe and Knowlton.

Ohio Jour. Sci., 36:256, 1936.

1 paratype; St. George, Utah, #28 (head missing).

### FAMILY THEREVIDAE

*Zionea tanneri* Hardy.

Ent. Soc. Amer. Ann., 31:144, 1938.

Genotype-Holotype; Zion Nat'l. Park, Utah (Vasco M. Tanner).

## FAMILY ASILIDAE

*Mallophora (Mallophorina) pallida* Johnson.

Great Basin Nat., 18:41, 1958.

Holotype, Allotype and 12 paratypes; Hollotype, Allotype and 1 paratype - Little Granite Mts., Dugway Pr. Grounds, Tooele Co., Utah; 21 August 1955 (D. E. Johnson). 5 paratypes - same except 19 August 1955. 1 paratype - same except 12 August 1955. 1 paratype - S.E. end of Cedar Mts., Tooele Co., Utah; 28 August 1955 (D. E. Johnson). 2 paratypes - same except 7 August 1957. 1 paratype - 9 miles east of Delta, Millard Co., Utah; 19 August 1957 (D. E. Johnson). 1 paratype - Cane Spring, Cedar Mts., Dugway Pr. Grounds, Tooele Co., Utah; 10 August 1955. (D. E. Johnson).

*Erax tanneri* Bromley.

N.Y. Ent. Soc. Jour., 44: 105, 1936.

Holotype - Buena Vista, Colo., ele. 7,800 ft.; August 1932 (C. Lynn Hayward).

*Erax knowltoni* Bromley.

Utah Acad. Sci., Arts and Letters, 14:104, 1937.

Paratype; Milford, Utah; June.

*Cyrtopogon albifacies* Johnson.

Great Basin Nat., 3(1):1, 1942.

Holotype, Allotype and 1 paratype; Holotype - Glacier Lake, Timpanogos, Utah Co., Utah (Vasco M. Tanner). Allotype and paratype - same (E. T. Vest).

*Neoitamus hardyi* Bromley.

Utah Acad. Sci., Arts and Letters, 15:61, 1938.

Holotype and 1 paratype; Spanish Fork, Utah (D. Elmo Hardy).

## FAMILY BOMBYLIIDAE

*Conophorus painteri* Priddy.

Kan. Ent. Soc. Jour. 31:12, 1958.

1 paratype; Bear Ears, Elk Ridge, Utah (Vasco M. Tanner).

*Poecilanthrax marmoreus* Johnson and Johnson.

Great Basin Nat., 17(1-2):16, 1957.

4 paratypes; Zion Nat'l. Park, Utah (Vasco M. Tanner).

*Poecilanthrax varius* Painter and Hall.

Kans. Agr. Expt. Sta. Tech. Bul., 106:114, 1960.

3 paratypes; 1 - North Fork, Provo Canyon, Utah (D. Elmo Hardy); 2 - Spanish Fork, Utah (D. Elmo Hardy).

*Poecilanthrax tanbarkensis* Painter and Hall.

Kans. Agr. Expt. Sta. Tech. Bul., 106(2):109-110, 1960.

5 paratypes; 3 - Tanbark Flat, L.A. Co., California; 2 - 12, 14 July, 1956 (J. C. Hall). 1 - Glendale, L.A. Co., California; 29 July, 1956 (E. I. Schlinger).

*Exoprosopa arenicola* Johnson and Johnson.

Great Basin Nat., 18(3-4):71, 1958.

4 paratypes; 2 - Little Granite Mt., Tooele, Co., Utah, 24 August 1956 (D. E. Johnson). 1 - Little Granite Mt., Dugway Proving Grounds, Tooele Co., Utah, 12 August 1956 (D. E. Johnson). 1 - S.E. end of Cedar Mts., Tooele Co., Utah, 21 August 1956 (D. E. Johnson).

*Exoprosopa utahensis* Johnson and Johnson.

Great Basin Nat., 18(3-4):81, 1958.

1 paratype, Antelope Springs, Millard Co., Utah, 10 August 1943 (D. E. Johnson).

*Exoprosopa sharonae* Johnson and Johnson.

Great Basin Nat., 18(3-4):78, 1958.

4 paratypes; 2 - Little Granite Mt., Tooele Co., Utah, 16 August 1958 (D. E. Johnson). 2 - Little Granite Mt., Dugway Proving Grounds, Tooele Co., Utah, 1 September 1955 (D. E. Johnson) Field #39.

*Poecilanthrax marginatus* Johnson and Johnson.

Great Basin Nat., 17(1-2):14, 1957.

Holotype and Allotype. Johnson's Pass, Tooele Co., Utah, 4 September 1955 (D. E. Johnson).

*Poecilanthrax ingens* Johnson and Johnson.

Great Basin Nat., 17(1-2):13, 1957.

Holotype and Allotype. Ramsey Canyon, Huachuca Mts., Cochise Co., Arizona, 5 September 1955 (F. G. Werner and G. D. Butler).

*Poecilanthrax sackenii monticola* Johnson and Johnson.

Great Basin Nat., 17(1-2):23, 1957.

Holotype - Aspen Grove, Utah Co., Utah, 23 July 1955 (D. E. Johnson).

Allotype - Emerald Lake, Mt. Timpanogos, Utah Co., Utah, 4 August 1955 (D. E. Johnson).

*Poecilanthrax robusta* Johnson and Johnson.

Great Basin Nat., 17(1-2):20, 1957.

Holotype and Allotype. Walker's Pass, California, 29 September 1945 (D. E. Johnson).

*Poecilanthrax fasciata* Johnson and Johnson.

Great Basin Nat., 17(1-2):11, 1957.

Holotype - Crowley, Colorado, 2 September 1939 (M. T. James).

*Poecilanthrax butleri* Johnson and Johnson.

Great Basin Nat., 17(1-2):11, 1957.

Holotype - Tucson, Arizona, 15 October 1955 (F. G. Werner) *Baccharis saraothroides*.

Allotype - Tucson, Arizona, 14 October 1955 (G. D. Butler) *Baccharis*.

*Exoprosopa sharonae* Johnson and Johnson.

Great Basin Nat. (1958), 18:78.

Holotype - West Side Little Granite Mt., Tooele Co., Utah, 3 September 1955 (D. E. Johnson).

Allotype - S.E. end of Cedar Mts., Tooele Co., Utah, 3 September 1955 (Sharon Johnson).

*Exoprosopa arenicola* Johnson and Johnson.

Great Basin Nat., 18(3-4):71, 1958.

Holotype and Allotype - Westside Little Granite Mrs., Tooele Co., Utah, 27 July 1955 (D. E. Johnson).

*Exoprosopa utahensis* Johnson and Johnson.

Great Basin Nat., 18(3-4):81, 1958.

Holotype - Antelope Springs, Millard Co., Utah, 10 August 1943 (D. E. Johnson).

Allotype - S.E. end of Cedar Mts., Tooele Co., Utah, 28 August 1955 (D. E. Johnson).

*Exoprosopa abdominalis* Johnson and Johnson.

Great Basin Nat., 19(1), 10, 1959.

Holotype and Allotype - Weldon, Kern Co., California; 5 August 1945 (D. E. Johnson).

*Exoprosopa butleri* Johnson and Johnson.

Great Basin Nat., 18(3-4):74, 1958.

Holotype - 4 miles East Apache Junction, Arizona; 15 May 1954 (G. D. Butler).

Allotype - Sycamore Canyon, Atascosa Mts., Arizona, 22 May 1955 (G. Butler) (*Senecio longilobus*).

*Oestrangrax farinosa* Johnson and Maughan.

Great Basin Nat., 13:18, 1953.

Holotype and 6 paratypes; Delta, Utah, 5 July (D. E. Johnson).

Allotype and 1 paratype; Delta, Utah; 5 July 1943 (D. E. Johnson).

2 paratypes - Delta, Utah, 4 July (D. E. Johnson).

*Conophorus sackenii* Johnson and Maughan.

Great Basin Nat., 13:22, 1953.

Holotype, allotype and 4 paratypes; Herlong, California, 14 May 1944 (D. E. Johnson).

*Exepacmus johnsoni* Copuillet.

Amer. Ent. Soc. Trans., 21:101, 1894.

1 Androtype ♂. Johnson and Johnson, Inyokern, California, 28 April 1945 (D. E. Johnson).

*Lordotus lutcelus* Hall.

Calif. Univ. Pubs. Ent., 10:26, 1954.

2 paratypes; Walkers Pass, California, 16 September 1945 (D. E. Johnson).

*Lordotus miscellus melanosis* Johnson and Johnson.

Great Basin Nat., 19:24, 1959.

Holotype, Allotype and 9 paratypes; Holotype, Allotype - Little Granite Mt., Tooele Co., Utah; 14 September 1957 (D. E. Johnson). 3 paratypes - same except 11 September 1956. 3 -

paratypes - same except 7 September 1956. 2 - Dog Area, Dugway Pr. Grounds, Tooele Co., Utah, 12 September 1955 (D. E. Johnson) Field #44. 1 - same except 31 August 1955 Field #38.

*Lordotus lutescens* Johnson and Johnson.

Great Basin Nat., 19(1):15. 1959.

6 paratypes; Las Cruces, New Mexico; 25 April 1954 (R. H. Beamer).

*Lordotus cingulatus lineatus* Johnson and Johnson.

Great Basin Nat., 19(1):22. 1959.

Holotype, Allotype and 2 paratypes; Ten miles E. San Quintin, Mexico, Baja California; 10 September 1955 (Paul H. Arnaud).

*Lordotus perplexus* Johnson and Johnson.

Great Basin Nat., 19(1):16. 1959.

Holotype and Allotype; Rillite, Arizona; 20 March 1934 (A. J. Basinger).

*Lordotus apicula* Coquillett.

Ent. Amer., 3:116, 1887.

Homotype and Plesiotype; Skull Valley, Tooele Co., Utah; 31 May 1956 (D. E. Johnson). One Pleisotype - Skull Valley, Tooele Co., Utah; 9 June 1957 (D. E. Johnson).

*Lordotus abdominalis* Johnson and Johnson.

Great Basin Nat., 19(1):10.

Holotype - Tucson, Arizona; 24 April 1954 (F. G. Warner). Allotype - West of Standfield, Arizona; 11 April 1955 (Butler and Werner).

*Lordotus arizonensis* Johnson and Johnson.

Great Basin Nat., 19(1):19. 1959.

Holotype - Sabino Canyon, Santa Catalina Mts., Arizona; 17 October 1955 (G. D. Butler).

*Lordotus cingulatus* Johnson and Johnson.

Great Basin Nat., 19(1):21. 1959.

5 paratypes; 17 miles north of Wolf Hole, Mohave Co., Arizona; 9 September 1958.

*Lordotus sororculus nigriventris* Johnson and Johnson.

Great Basin Nat., 19(1):17. 1959.

Holotype, Allotype, and 8 paratypes; Holotype, Allotype and 1 paratype - Skull Valley, Tooele Co., Utah; 13 May 1956 (D. E. Johnson). 1 paratype - same except 3 May 1956. 1 paratype - same except 18 May 1958. 2 paratypes - same except 2 June 1957. 1 paratype - Dugway Mts., Juab Co., Utah; 25 May 1958 (D. E. Johnson). 2 paratypes - Wig Mts., Dugway Pr. Grounds, Tooele Co., Utah; 23 April 1956 (D. E. Johnson).

*Poecilantrax johnsonorum* Painter and Hall.

Kans. Agr. Expt. Sta. Tech. Bul., 106:69. 1960.

Holotype and Allotype:; Little Granite Mt., Tooele Co., Utah; 14 September 1957 (D. E. Johnson).

*Poecilanthrax hyalinipennis* Painter and Hall.

Kans. Agr. Expt. Sta. Tech. Bul., 106:64, 1960.

4 paratypes. 3 - Little Granite Mt., Tooele Co., Utah; 14 September 1957. 1 - Little Granite Mt., Dugway Pr. Grounds, Tooele Co., Utah; 15 September 1955 (D. E. Johnson) Field #45.

*Poecilanthrax apache* Painter and Hall.

Kans. Agr. Expt. Sta. Tech. Bul., 106:31, 1960.

2 paratypes; Tucson, Arizona; 15 October 1955 (F. G. Werner) (*Baccharis sarothroides*).

*Poecilanthrax painteri* Maughan.

Kans. Ent. Soc. Jour., 8:56-57, 1935.

Allotype and 3 paratypes; Allotype and 1 paratype - Blacksmith Fork Canyon, Cache Co., Utah, 20 June 1944 (D. E. Johnson); 2 paratypes - Lava Hot Springs, Idaho, 27 June 1948 (D. E. Johnson).

*Poecilanthrax alpha zionensis* Johnson and Johnson.

Great Basin Nat., 17(1-2):6, 1957.

Holotype - Zion National Park, Utah, 8 July 1932 (D. E. Johnson).

*Lordotus cingulatus rufotibialis* Johnson and Johnson.

Great Basin Nat., 19:23, 1959.

Holotype and Allotype; Phoenix, Arizona, 29 September 1940 (Parker).

*Conophorus hiltoni* Priddy.

Kans. Ent. Soc. Jour., 31:24, 1958.

Holotype, Allotype and 2 paratypes; Herlong, California, 14 May 1944 (D. E. Johnson).

*Conophorus collini* Priddy.

Kans. Ent. Soc. Jour., 31:31, 1958.

1 paratype; Oceano, S. Luis Obispo Co., California, 24 April 1951 (R. M. Bohart).

*Conophorus painteri* Priddy.

Kans. Ent. Soc. Jour., 31:12, 1958.

Holotype, Allotype and 4 paratypes; American Fork Canyon, Utah, 4 July 1953 (D. E. Johnson); 1 paratype - Aspen Grove, Utah Co., Utah, 19 July (D. E. Johnson).

*Amphicosmus arizonensis* Johnson and Johnson.

Great Basin Nat., 19:67, 1960.

Holotype and Allotype; Tucson Mts., Arizona; 16 August 1955 (G. D. Butler).

*Dicranoclista fasciata* Johnson and Johnson.

Great Basin Nat., 19:71, 1960.

Holotype; Cedar Creek, Arizona; 15 miles West of Fort Apache.

21 June 1957 (G. Butler and F. Werner). Allotype; Provo, Utah Co., Utah, July 1933 (D. E. Johnson).

*Villa utahensis* Maughan.

Kans. Ent. Soc. Jour., 8:51, 1935.

2 paratypes; Provo, Utah; 29 April 1934 (D. E. Johnson).

1 metatype; Provo environs, Utah (D. E. Johnson).

#### FAMILY DOLICHOPODIDAE

*Dolichopus indianus* Harmston and Knowlton.

Amer. Midl. Nat., 36:672, 1946.

1 paratype; Indianapolis, Indiana; 7 March 1943 (F. C. Harmston).

1 paratype; Indianapolis, Indiana; 7 March 1943 (F. C. Harmston).

*Medeterus arnaudi* Harmston.

Great Basin Nat., 11(1-2):12, 1951.

♂ paratype; Redwood City, California, San Mateo Co.; 4 June 1946 (Paul H. Arnaud).

*Aphrosylus wirthi* Harmston.

Great Basin Nat., 11(1-2):13, 1951.

1 paratype; Moss Beach, San Mateo Co., California; 21 March 1948 (W. W. Wirth) (Intertidal rocks).

#### FAMILY PIPUNCULIDAE

*Chalarus latifrons* Hardy.

Kans. Univ. Sci. Bul., 29:33, 1943.

6 paratypes; 3 - Austin, Nevada; 12 August 1940 (R. H. Beamer, D. E. Hardy). 1 - Cloudcroft, New Mexico; 27 June 1940 (R. H. Beamer); 1 - Ruidoso, New Mexico; 26 June 1940 (R. H. Beamer). 1 - Pacific, California; 9 August 1940 (D. E. Hardy).

*Tomosvaryella tumida* Hardy.

Kans. Ent. Soc. Jour., 13:112, 1940.

2 paratypes; Belle Glade, Florida; 18 July 1939 (R. H. Beamer).

*Tomosvaryella xerophila* Hardy.

Kans. Univ. Sci. Bul., 29:188, 1943.

2 paratypes; 1 - Cuervo, New Mexico; 23 June 1940 (L. C. Kuitert). 1 - Rustler's Peak, Chiricahua Mts., Arizona; 5 July 1940 (D. Elmo Hardy).

*Tomosvaryella tumida* Hardy.

Kans. Ent. Soc. Jour., 13:112, 1940.

1 paratype; Belle Glade, Florida; 18 July 1939 (R. H. Beamer).

*Tomosvaryella lepidipes* Hardy.

Kans. Univ. Sci. Bul. 29:166, 1943.

4 paratypes; 2 - Garnett, Kansas; 22 September 1940 (D. Elmo Hardy). 1 - Maybell, Colorado; 18 August 1940 (R. H.

Beamer). 1 - Yosemite National Park, California; 1 August 1940 (D. Elmo Hardy).

*Tomosvaryella beameri* Hardy.

Kans. Ent. Soc. Jour., 13:107, 1940.

1 paratype; Cherokee Co., Kansas; 30 August 1939 (R. H. Beamer).

*Tomosvaryella floridensis* Hardy.

Kans. Ent. Soc. Jour., 13:109, 1940.

1 ♂ paratype; Adel, Ga.; 11 August 1939 (J. D. Beamer).

*Tomosvaryella wilburi* Hardy.

Kans. Ent. Soc. Jour., 12:22, 1939.

1 paratype, 8 metatypes; paratype - Manhattan, Kansas; 13 August 1937 (D. A. Wilbur). 3 metatypes - Tonganoxie, Kansas; 6 May 1939 (D. Elmo Hardy). 4 metatypes - Cherokee Co., Kansas; 30 August 1939 (R. H. Beamer). 1 metatype - Lawrence, Kansas; 22 August 1939 (D. Elmo Hardy).

*Tomosvaryella coquillettii coquillettii* (Kertesz).

*Tomosvaryella proxima* Cresson.

Amer. Ent. Soc. Trans., 36:318, 1911.

3 homotypes; Tonganoxie, Kansas; 6 May 1939 (R. H. Beamer) by D. Elmo Hardy.

*Tomosvaryella similis* Hough.

Boston Soc. Nat. Hist. Proc., 29:84, 1899.

2 homotypes; Garnett, Kansas; 29 August 1939 (R. H. Beamer) compared by D. Elmo Hardy.

*Tomosvaryella contorta* Hardy.

Kans. Ent. Soc. Jour., 12:18, 1939.

10 metatypes; 1 - Onyx, California; 23 August 1940 (D. Elmo Hardy). 1 - Onyx, California; 23 August 1940 (R. H. Beamer). 1 - Kernville, California; 24 August 1940 (R. H. Beamer). 3 - Tonganoxie, Kansas; 6 May 1939 (D. Elmo Hardy). 2 - Garnett, Kansas; 29 August 1939 (J. D. Beamer).

*Tomosvaryella subvirescens* Loew.

Berlin Ent. Ztschr., 16:87, 1872.

7 homotypes; 1 - Togonoxie, Kansas; 6 May 1939 (D. Elmo Hardy). 2 - Togonoxie, Kansas; 3 September 1939 (R. H. Beamer). 4 - Douglas Co., Kansas; 23 August 1939 (R. H. Beamer) compared by D. Elmo Hardy.

*Tomosvaryella exilidens* Hardy.

Kans. Ent. Soc. Bul., 29:162, 1943.

2 paratypes; 1 - Moriarty, New Mexico; 24 June 1940 (E. E. Kenaga). 1 - Sunnyside Canyon, Huachuca Mts., Arizona; 9 July 1940 (D. Elmo Hardy).

*Tomosvaryella turgida* Hardy.

Kans. Ent. Soc. Jour., 13:113, 1940.

2 paratypes; Griffin, Georgia; 12 August 1939 (R. H. Beamer, A. T. Hardy).

*Tomosvaryella agnesea* Hardy.

Kans. Ent. Soc. Jour., 13:103, 1940.

2 paratypes and 4 metatypes; Paratypes, 1 - Manhattan, Kansas, 15 June 1943 (D. A. Wilbur). 1 - Douglas Co., Kansas; 23 August 1938 (R. H. Beamer). Metatypes, 1 - Glasco, Kansas; 24 August 1940 (E. E. Kenaga). 1 - Arivaca, Arizona; 12 July 1940 (R. H. Beamer). 1 - Kernville, California; 24 July 1940 (R. H. Beamer). 1 - Onyx, California; 23 July 1940 (D. Elmo Hardy).

*Tomosvaryella dissimilis* Hardy.

Kans. Univ. Sci. Bul., 29:161, 1943.

2 paratypes; 1 ♂ - Chiricahua Mts., Arizona; 4 July 1940 (D. Elmo Hardy). 1 - Bishop, California; 28 July 1940 (L. C. Kuitert).

*Tomosvaryella aliena* Hardy.

Kans. Ent. Soc. Jour., 20:146-153, 1947.

New name for *propinqua* Hardy.

Kans. Univ. Sci. Bul., 29:169, 1943.

5 paratypes; 1 - Goshen, Utah; 16 August 1940 (R. H. Beamer). 2 - Goshen, Utah; 16 August 1940 (L. C. Kuitert). 1 - Fruita, Colorado; 4 September 1938 (D. Elmo and A. Hardy). 1 - Lone Pine, California; 28 July 1940 (R. H. Beamer).

*Tomosvaryella quadridentis* Hardy.

Kans. Univ. Sci. Bul., 29:172, 1943.

3 paratypes; 2 - Carson City, Nevada; August 1940 (D. Elmo Hardy). 1 ♂ - Silver Lake, Kansas; 24 August 1940 (L. J. Lipovsky).

*Tomosvaryella brevijuncta* Hardy.

Kans. Univ. Sci. Bul., 29:155, 1943.

1 paratype; Palm City, California; 19 July 1940 (R. H. Beamer).

*Dorylomorpha tridentata* Hardy.

Kans. Univ. Sci. Bul., 29:141, 1943.

2 paratypes; 1 - Lake Tahoe, California; 11 August 1940 (R. H. Beamer). 1 - Lake Tahoe, California; 11 August 1940 (D. Elmo Hardy).

*Pipunculus nevadensis* Hardy.

Kans. Univ. Sci. Bul., 29:106, 1943.

1 paratype; Fallon, Nevada; 12 August 1940 (E. E. Kenaga).

*Pipunculus huachueanus* Hardy.

Kans. Univ. Sci. Bul., 29:95, 1943.

2 paratypes; 1 - Sunnyside Canyon, Huachuca Mts., Arizona; 9 July 1940. (R. H. Beamer). 1 - Sunnyside Canyon, Huachuca Mts., Arizona; 9 July 1940 (D. Elmo Hardy).

*Pipunculus cinctus subtilis* Hardy.

Kans. Univ. Sci. Bul., 29:84, 1943.

1 paratype; Pingree Park, Calorado; 11 July 1937 (C. L. Johnston).

*Pipunculus kansensis* Hardy.

Kans. Ent. Soc. Jour., 13:102, 1940.

2 paratypes; 1 - Tekio, North Dakota; 28 July 1937 (C. L. Johnston). 1 - Douglas Co., Kansas; 25 August 1939 (R. H. Beamer).

*Pipunculus albofasciatus* Hough.

Boston Soc. Nat. Hist. Proc., 29:85, 1899.

3 homotypes; 2 - Garnett, Kansas; 29 August 1939 (R. H. Beamer). 1 - Clarksville, Tenn.; 15 July 1939 (D. Elma Hardy) compared by D. Elmo Hardy.

*Pipunculus cingulatus* Loew.

Berlin Ent. Ztschr. (1865), 9:176, 1866.

2 homotypes; Tangonoxie, Kansas; 6 May 1939 (D. Elmo Hardy) compared by D. Elmo Hardy.

#### FAMILY CHLOROPIDAE

*Oscinella hesperia* Sabrosky.

Canadian Ent., 72:219, 1940.

4 paratypes; Spanish Fork, Utah Co., Utah (D. Elmo Hardy).

#### ORDER HYMENOPTERA

##### FAMILY SCOLIIDAE

*Campsomeris solomonis* Krombein.

Nova Guinea (Zool.) No. 22:570, 1963.

2 paratypes; Solomon Islands, Guadalcanal; 1944 (Ernest Reimschissel).

*Scolia pulchripennis franclemonti* Krombein

Nova Guinea (Zool.) No. 22:636, 1963.

1 paratype; Solomon Islands, Guadalcanal; 1944 (D E. Beck).